



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,395	03/12/2004	Harish Muthali	110348-134906	1675
31817	7590	11/04/2005	EXAMINER	
SCHWABE, WILLIAMSON & WYATT PACWEST CENTER, SUITE 1900 1211 S.W. FIFTH AVE. PORTLAND, OR 97204			CHANG, JOSEPH	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/801,395	<b>Applicant(s)</b> MUTHALI ET AL.	
	<b>Examiner</b> Joseph Chang	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-13 and 16-23 is/are rejected.
- 7) ☒ Claim(s) 5-9, 14, 15, 24, 25 and 29-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ramet, US Patent 6,838,952.

Regarding claim 1, Ramet discloses in Figures 2-6 an apparatus comprising an LC tank (L1, L2, C1); a drive circuit (Q1, Q2, R1, R2, G, C2, C3) including a first generator a first generator (Q1, Q2) coupled to the LC tank (L1, C1), to drive the LC tank, and a current source (G) coupled to the first generator (Q1) to provide a source current to the first generator; and a feedback loop (4) including a peak detect circuit (6), coupled to the LC tank, to generate a peak detect voltage signal representing an oscillation amplitude of the LC tank; a reference voltage generator (5) to generate a single reference voltage (node between R8 and R9); and an operational amplifier (8), with a pair of input terminals (see C4, C5) coupled to the peak detect circuit (6) and the reference voltage generator (5) and an output terminal (output of 8) coupled to the current source (G) to compare the peak detect voltage signal and the single reference voltage signal (intrinsic functionality of differential amplifier, 8) and to generate an

Art Unit: 2817

analog bias signal (output) in response to a difference between the peak detect voltage signal and the single reference voltage (inputs -, +), with the current source being adapted to adjust the magnitude of the current source current in response to the analog bias signal (column 3, lines 30-33).

Regarding claims 3, 10 and 12, Figure 3 clearly shows as recited in the claim: a first tank terminal (Left side of L1, C1), a second tank terminal (right side of L2, C1), the first generator (Q1, Q2), commonly coupled terminals (emitters of Q1 and Q2), a single current source transistor (G, such as MN1 of Figure 6), a first and second blocking capacitors (C4 and C5).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2817

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 4, 11, 13 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramet.

Regarding claims 2, 11 and 21, as discussed above in the claims 1, 3, 10 and 12 rejection, Ramet discloses the apparatus as recited in the claims except a capacitor being coupled between the output terminal of the operational amplifier and an electrical ground. As would have been well known in the art, such location of the capacitor is to filter unwanted signals, known as a decoupling capacitor and therefore it would have been obvious to one of ordinary skill in the art to use a capacitor at the output of the operational amplifier 8 of Ramet because such a modification would have provided the benefit of filtering unwanted signals.

Regarding claims 4, 13, 23, having a plurality of identical components in the peak detect circuit and the reference voltage generator would have been obvious based on a reduction of manufacture cost consideration.

Regarding claim 16, such modification using variable capacitors are obvious based on the adjustment of the oscillation frequency.

Regarding claims 17, Figures 2-6 show clearly as recited in the claim except the transistors being MOSFETs and connections associated with the MOSFETs. Such a modification would have been obvious based on the art-recognized equivalency.

Regarding claim 18, the operational amplifier being a folded cascode operational amplifier would have been obvious based on the current buffering consideration.

Regarding claims 19, 20 and 22, as discussed above in the claims rejection, Ramet discloses the apparatus as recited in the claims. However, its application using a PLL in a receiver of a fiber-optical data communications system is not explicitly disclosed. As intended, such an application would have been obvious.

***Allowable Subject Matter***

Claims 5-9, 14-15, 24-25, 29, 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the best prior art of record, Ramet, taken alone or in combination of other references, does not teach or fairly suggest "the first detect and first reference transistors are identical in design, the second detect and second reference transistors are identical in design, and the detect and reference current sources are identical in design", as set forth in the claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 2817

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Chang  
Patent Examiner  
Art Unit 2817